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10/722,366	11/25/2003	Peter Zimmermann	GK-OEH-232/500814.20134	8580

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REED SMITH, LLP  
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599 LEXINGTON AVENUE, 29TH FLOOR  
NEW YORK, NY 10022-7650

EXAMINER
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WASHBURN, DOUGLAS N

ART UNIT	PAPER NUMBER
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2863

MAIL DATE	DELIVERY MODE
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05/08/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/722,366

Applicant(s)

ZIMMERMANN ET AL.

Examiner

Douglas N. Washburn

Art Unit

2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 March 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1 Applicant amendment overcomes §112-2 rejection of claim 4 and the rejection is withdrawn.

Applicant amendment overcomes objection to claims 1-4 and the objection is withdrawn.

Applicant amendment overcomes objection to drawings and the objection is withdrawn.

Applicant's arguments, see amendment, filed 12 March 2007, with respect to the rejections of claims 1-3 under §102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new grounds of rejection is made in view of Shvets et. (US 2003/0175163).

### ***Claim Rejections - 35 USC § 103***

2 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson et al. (US 6,983,636) (Hereafter referred to as Johnson) in view of Shvets et al. (US 2003/0175163) (Hereafter referred to as Shvets).

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Johnson teaches:

Regarding claim 1, a multi-channel metering apparatus (liquid handling system; column 6, line 23; figure 1, element 20) with automatic calibration (column 22, lines 1-6) with several dispensing channels (1) (dispensing orifices; column 13, lines 63-65; figure 4, element 35) respectively with a nozzle (2) (nozzles; column 5, lines 32-35; figure 9, element 35) and a micro-valve (4) (dispensing actuators; column 8, line 47; figure 3, element 32), whereby the micro-valves (4) respectively exhibit a discharge opening (3) (fluid communication passageway; column 6, line 34; figure 2, element 33), which is respectively connected with one of the nozzles (2) (figure 2) and at least one supply opening (5 or 6) (fluid pressure line; column 6, lines 29-31; figure 2, element 30) is respectively present on the micro-valves (4), which are respectively connected with an outlet of a distributor (8, 13 or 15) (pressure subsystem; column 6, line 24; figure 2, element 22), the inlet of which is indirectly connected via a flow sensor (10) (sensor assembly; column 16, lines 64 et seq and column 17, lines 1 and 2; figure 9, element 70) with a vessel (9, 14 or 17) (system fluid reservoir; column 6, line 28; figure 4, element 27) filled with a fluid (system fluid; column 6, lines 64 and 65; figure 4, element 40) and the paths between the inlet and the outlets of the distributor exhibit the same fluidic resistance as well as a pressure source (19) (fluid pressure lines; column 6, line 29; figure 3, element 28 and 30) to produce overpressure in the vessel (9, 14 or 17) (column 14, lines 58-64) and a control unit (16) (control unit; column 18, lines 17 and 18; figure 6, element 53) connected with the flow sensor (10) and the micro-valves (4) and generates the individual control signals for the micro-valves (4) from the measured values received from the flow sensor (10) (column 14, lines 45-56).

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Regarding claim 2, The supply openings (5 or 6) are first supply openings (5) (figure 2, element 28) and second supply openings (6) (figure 2, element 30), whereby the first supply openings (5) are respectively connected with an outlet of the distributor (8, 13 or 15) (fluid dispensing source; column 6, line 31; figure 2, element 32), which here is a calibration medium distributor (8) filled with a calibration medium (system fluid; column 6, lines 64 and 65; figure 4, element 40), and the second supply openings (6) which respectively exhibit a connection with a respective dispensing medium vessel (12) (column 6, lines 44-50; figure 2, element 32) such that at the first supply openings (5) the calibration fluid and at the second supply openings (6) the dispensing fluid is available and on admission of the vessel (9, 14 or 17) (pressure subsystem; column 6, line 24; figure 2, element 22), which here is a calibration medium vessel (9) with pressure via an opened micro-valve (4) (figure 2, element 37) calibration fluid is delivered, whereby the dispensing channels are calibrated in relation to each other with the calibration fluid (column 19, lines 19-24).

Regarding claim 3, And the supply openings (5 or 6) are first supply openings (5) and second supply openings (6), whereby the first supply openings (5) are respectively connected with an outlet of the distributor (8, 13 or 15), which here is a calibration medium distributor (8) filled with a calibration medium, and the second supply openings (6) respectively exhibit a connection with a dispensing medium vessel (12) such that at the first supply openings (5) and at the second supply openings (6) the dispensing fluid is available and on admission of the vessel (9, 14 or 17), which here is a calibration medium vessel (9) with pressure via an opened micro-valve (4) dispensing fluid is delivered, whereby the dispensing channels can be calibrated in relation to each other with different dispensing fluid (column 19, lines 19-24).

Johnson is silent regarding:

Regarding claim 1, a distributor (8, 13 or 15) the inlet of which is indirectly connected via a flow sensor (10) with a vessel.

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Regarding claim 1, the paths between the inlet and the outlets of the distributor exhibit the same fluidic resistance.

Svets teaches:

Regarding claim 1, a distributor (8, 13 or 15) the inlet of which is indirectly connected via a flow sensor (10) with a vessel (a dispenser comprising a metering valve connected to the pressurized liquid delivery source and a multi nozzle dispensing head for dispensation of droplets; claim 1; lines 4-9; figure 1, elements 11 (pressure source), 16 (metering valve), and 1 (multi-nozzle dispensing head)).

Regarding claim 1, the paths between the inlet and the outlets of the distributor exhibit the same fluidic resistance (Resistance to the flow of all the secondary nozzles should be preferably identical: ¶ 0062, lines 1 and 2)

Regarding claim 1, it would have been obvious to one skilled in the art at the time of the instant invention to modify the teaching of Johnson of liquid handling system with the teaching of Svets of a distributor the inlet of which is indirectly connected via a flow sensor with a vessel because one source of pressurized liquid , a metering valve or device and its associated dispensing heads or nozzles would have simplified the design of the dispensing assembly and its cost reduced.

Further regarding claim 1, it would have been obvious to one skilled in the art at the time of the instant invention to modify the teaching of Johnson of liquid handling system with the teaching of Svets of paths between the inlet and the outlets of the distributor exhibit the same fluidic resistance because paths between the inlet and the outlets of the distributor exhibiting the same fluidic resistance would have ensured that variation in the droplet volumes dispensed from the separate channels is small.

***Allowable Subject Matter***

3 Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

Claim 4 recites, in part, "the distributor (8, 13 or 15) is a rinsing agent distributor (13) and the vessel (9, 14 or 17) is a rinsing agent vessel (14) and both are indirectly connected with each other, whereby **in parallel to the flow through the flow sensor (10) a bypass (20) is present**". This feature **in combination with the remaining claimed structure** avoids the prior art of record.

It is these limitations, which are not found, taught or suggested in the prior art of record, and are recited in the claimed combination that makes these claims allowable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

4 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas N. Washburn whose telephone number is (571) 272-2284. The examiner can normally be reached on Monday through Thursday 6:30 AM - 4:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DNW

